

refractive index variation, linked to the variation in mass at the sensor surface, this refractive index variation being able to be correlated with the analysis of the biochemical entity.

A2
10. (Amended) Sensor system according to claim 1, characterised in that the monomer compounds are labelled with a chromophor or a fluorophor allowing an absorption or fluorescence measurement to be made which can be correlated with the analysis of the biochemical entity.

11. (Amended) Sensor system according to claim 1, characterised in that the sequence of nucleotides forming the detection unit is directly linked to the surface of the sensor by a covalent link.

12. (Amended) Sensor system according to claim 1, characterised in that the detection unit is linked in a one-directional manner by its end 3' or 5'.

13. (Amended) Sensor system according to claim 1, characterised in that the nucleotide sequence forming the detection unit is linked to the surface of the sensor by photo-immobilisation.

14. (Amended) Sensor system according to claim 1, characterised in that the nucleotide sequence forming the detection unit is indirectly linked to the sensor surface by a bi-functional scaffold, which is itself linked to said surface by a docking unit.

15. (Amended) Sensor system according to claim 14, characterised in that the compounds allowing the scaffold to be formed are selected from among, a bi-functional molecular entity, such as a hetero-bi-functional cross linking agent, an antibody modified by a nucleotide or one of its fragments, DNA dendrimers of suitable size, and metal or semiconductor nanocrystalline compound colloids.
